10/561,031

olicies apply.

They are available for your review at:

http://www.cas.org/legal/infopolicy.html

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L5 STRUCTURE UPLOADED

=> d L5 HAS NO ANSWERS L5 STR



Structure attributes must be viewed using STN Express query preparation.

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REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 13:58:26 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 36 TO ITERATE

36 ITERATIONS

100.0% PROCESSED SEARCH TIME: 00.00.01 1 ANSWERS

L6 1 SEA SSS FUL L5

L7 1 L6

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L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

LANGUAGE:

ACCESSION NUMBER: 2005:29299 CAPLUS

DOCUMENT NUMBER: 142:113615

TITLE: Three-step method for producing alkyl 4,4-difluoroacetoacetate esters
INVENTOR(S): Gallenkamp. Bernd: Mulder, Lubbertus

German

INVENTOR(S): Gallenkamp, Bernd; Mulder, Lubbertus
PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent

FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

| | PA: | TENT I | .00 | | | KIN | DATE | | | | LICAT | DATE | | | | | | | | |
|------|------------------------|--------|-----|-----|-----|-------------|------|------|------|-----|------------------|-------|------|-----|-----|----------|------|-----|--|--|
| | WO 2005003077 | | | | | A1 2005011 | | | 0113 | | | | | | | | | | | |
| | W: AE, AG, AL, | | | | | | | | | | | | | | | | | | | |
| | | | CN, | CO, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ | , EC, | EE, | EG, | ES, | FI, | GB, | GD, | | |
| | | | GE, | GH, | GM, | HR, | HU, | ID, | IL, | IN, | IS | , JP, | KΕ, | KG, | KΡ, | KR, | KZ, | LC, | | |
| | | | LK, | LR, | LS, | LT, | LU, | LV, | MA, | MD, | MG | , MK, | MN, | MW, | MX, | MZ, | NA, | NI, | | |
| | | | NO, | NZ, | OM, | PG, | PH, | PL, | PT, | RO, | RU | , sc, | SD, | SE, | SG, | SK, | SL, | SY, | | |
| | | | ΤJ, | TM, | TN, | TR, | TT, | TZ, | UA, | UG, | US | , UZ, | VC, | VN, | YU, | ZA, | ZM, | zw | | |
| | | RW: | BW, | GH, | GM, | KE, | LS, | MW, | MZ, | NA, | SD | , SL, | SZ, | TZ, | UG, | ZM, | ZW, | ΑM, | | |
| | | | ΑZ, | BY, | KG, | ΚZ, | MD, | RU, | ΤJ, | TM, | AT | , BE, | ВG, | CH, | CY, | CZ, | DE, | DK, | | |
| | | | EE, | ES, | FΙ, | FR, | GB, | GR, | HU, | ΙE, | IT. | , LU, | MC, | NL, | PL, | PT, | RO, | SE, | | |
| | | | | | | BF, | ВJ, | CF, | CG, | CI, | CM | , GA, | GN, | GQ, | GW, | ML, | MR, | ΝE, | | |
| | | | | TD, | | | | | | | | | | | | | | | | |
| | | | | | | A1 20050127 | | | | | | | | | | | | | | |
| | EP | 1644 | | | | | | | | | | 2004- | | | | | | | | |
| | | R: | | | | | | | | | | , IT, | | | NL, | SE, | MC, | PT, | | |
| | | | | | | | | | | | | , HU, | | | | | | | | |
| | | | | | | | | | | | CN 2004-80018512 | | | | | | | | | |
| | JP 2007506673 | | | | | | | 2007 | 0322 | | JP : | 2006- | 5180 | 11 | | 20040618 | | | | |
| | | | | | | | | | | | US 2005-561031 | | | | | | | | | |
| | IN 2005DN05898 | | | | | | | 2007 | 0824 | | | 2005- | | | | | 0051 | | | |
| PRIO | PRIORITY APPLN. INFO.: | | | | | | | | | | | 2003- | | | | | | | | |
| | | | | | | | | | | | | 2003- | | | | | | | | |
| | | | | | | | | | | | WO: | 2004- | EP66 | 07 | | W 2 | 0040 | 618 | | |

OTHER SOURCE(S):

- CASREACT 142:113615; MARPAT 142:113615
- AB Alkyl difluoroacetoacetate esters (e.g., Et 4,4-difluoroacetoacetate) are prepared by: (A) a reaction of alkyl 4-chloro-4,4-difluoroacetoacetates (e.g., Et 4-chloro-4,4-difluoroacetoacetate) with trialkyl phosphites P(OR1)3 (R1 = Cl-4 alkyl; e.g., tri-Me phosphite) giving phosphate esters F2C:(DP(:0)(OR1)2|CIR2CO2R [R = alkyl; e.g., Exp. 2R = alkyl; e.g., Exp. 2R = alkyl; e.g., Exp. 2R = alkyl; exp. 2R = alk
 - alkyl; e.g., diamethoxyphosphorylloxy]-4,4-difluorobut-3-enoate]; (B) the step (A) phosphate esters are reacted with an amine HN(R2)R3 (R2, R3 = H, C1-4 alkyl; e.g., diisopropylamine) to give enamines F2c:ClN(R2)R3]CH2CO2R [e.g., Et 3-(diisopropylamino)-4,4-difluorobut-3-enoate]; and (C) acid (e.g., acqueous HC1) hydrolyxis of the step (B) enamines.
- IT 823234-80-6P
 - RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 - (in a three-step method for producing alkyl 4,4-difluoroacetoacetate esters)
- RN 823234-80-6 CAPLUS
- CN 3-Butenoic acid, 3-[(dimethoxyphosphinyl)oxy]-4,4-difluoro-, ethyl ester

10/923,271

(CA INDEX NAME)

$$\begin{array}{c|c} \mathsf{O} & \mathsf{CF}_2 & \mathsf{O} \\ || & || & || \\ \mathsf{MeO-P-O-C-CH}_2-\mathsf{C-OEt} \\ || & \mathsf{OMe} \end{array}$$

REFERENCE COUNT:

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>

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3

L8 STRUCTURE UPLOADED

=> d L8 HAS NO ANSWERS L8 STR



Structure attributes must be viewed using STN Express query preparation.

=> d ibib abs hitstr

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:29299 CAPLUS

DOCUMENT NUMBER: 142:113615
TITLE: Three-step method for producing alkyl

4,4-difluoroacetoacetate esters

INVENTOR(S): Gallenkamp, Bernd; Mulder, Lubbertus
PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| | | | | | KIN | | | | | | | DATE | | | | | | |
|---------|------------------------|-------------|-----|-----|-------------|-----|------|------|-----|------|--------|------|----------|----------|------|------|-----|--|
| | 2005 | A1 20050113 | | | | | | | | | | | | | | | | |
| | W: AE, AG, AL, | | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BW, | BY, | BZ, | CA, | CH, | | | |
| | | CN, | CO, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | EG, | ES, | FI, | GB, | GD, | |
| | | GE, | GH, | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC, | |
| | | LK, | LR, | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NA, | NI, | |
| | | NO, | NZ, | OM, | PG, | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SY, | |
| | | TJ, | TM, | TN, | TR, | TT, | TZ, | UA, | UG, | US, | UZ, | VC, | VN, | YU, | ZA, | ZM, | ZW | |
| | RW: | BW, | GH, | GM, | KE, | LS, | MW, | MZ, | NA, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AM, | |
| | AZ, BY, KG, | | KZ, | MD, | RU, | TJ, | TM, | AT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | | | |
| | | EE, | ES, | FI, | FR, | GB, | GR, | HU, | IE, | IT, | LU, | MC, | NL, | PL, | PT, | RO, | SE, | |
| | | SI, | SK, | TR, | BF, | BJ, | CF, | CG, | CI, | CM, | GA, | GN, | GQ, | GW, | ML, | MR, | NE, | |
| | | SN, | TD, | TG | | | | | | | | | | | | | | |
| DE | DE 10331496 | | | | A1 20050127 | | | | | DE 2 | 2003- | 1033 | | 2 | 0030 | 711 | | |
| EP | 1644 | 314 | | | A1 | | 2006 | 0412 | | EP 2 | 2004- | | 20040618 | | | | | |
| | R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | |
| | | IE, | SI, | FI, | RO, | CY, | TR, | BG, | CZ, | EE, | HU, | PL, | SK | | | | | |
| | 1812 | | | | | | 2006 | 0802 | | CN 2 | 2004- | 8001 | | 20040618 | | | | |
| JP | 2007 | 5066 | 73 | | T | | | | | | | | 20040618 | | | | | |
| US | US 20060149091 | | | | | | 2006 | 0706 | | US 2 | 2005- | 5610 | 31 | | 2 | 0051 | 216 | |
| IN | IN 2005DN05898 | | | | | | 2007 | 0824 | | IN 2 | 2005-1 | DN58 | 98 | | 2 | 0051 | 219 | |
| PRIORIT | PRIORITY APPLN. INFO.: | | | | | | | | | DE 2 | 2003- | 1032 | 9450 | | A 2 | 0030 | 701 | |
| | | | | | | | | | | DE 2 | 2003- | 1033 | 1496 | | A 2 | 0030 | 711 | |
| | | | | | | | | | | WO 2 | 2004-1 | EP66 | 07 | | W 2 | 0040 | 618 | |

OTHER SOURCE(S): CASREACT 142:113615; MARPAT 142:113615

Alkyl difluoroacetoacetate esters (e.g., Et 4,4-difluoroacetoacetate) are prepared by: (A) a reaction of alkyl 4-chloro-4, 4-difluoroacetoacetates (e.g., Et 4-chloro-4,4-difluoroacetoacetate) with trialkyl phosphites P(OR1)3 (R1 = C1-4 alkyl; e.g., tri-Me phosphite) giving phosphate esters F2C:C[OP(:O)(OR1)2]CH2CO2R[R = alkyl; e.g., Et3-[(dimethoxyphosphoryl)oxy]-4,4-difluorobut-3-enoate]; (B) the step (A) phosphate esters are reacted with an amine HN(R2)R3 (R2, R3 = H, C1-4

alkyl; e.g., diisopropylamine) to give enamines F2C:C[N(R2)R3]CH2CO2R [e.g., Et 3-(diisopropylamino)-4,4-difluorobut-3-enoate]; and (C) acid (e.g., aqueous HCl) hydrolysis of the step (B) enamines.

823234-80-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (in a three-step method for producing alkyl 4,4-difluoroacetoacetate

esters)

823234-80-6 CAPLUS RN CN

3-Butenoic acid, 3-[(dimethoxyphosphinyl)oxyl-4,4-difluoro-, ethyl ester (CA INDEX NAME)

$$\begin{array}{c|c} \mathsf{O} & \mathsf{CF}_2 & \mathsf{O} \\ || & || & || \\ \mathsf{MeO} - \mathsf{P} - \mathsf{O} - \mathsf{C} - \mathsf{CH}_2 - \mathsf{C} - \mathsf{OEt} \\ || & \mathsf{OMe} \end{array}$$

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 19 ibib abs hitstr

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:29299 CAPLUS

DOCUMENT NUMBER: 142:113615

TITLE: Three-step method for producing alkyl

4,4-difluoroacetoacetate esters INVENTOR(S): Gallenkamp, Bernd; Mulder, Lubbertus

PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2 DOCUMENT TYPE: Patent

LANGUAGE: German FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| | PA: | TENT | NO. | | | KIN | D | DATE | | | APPLICATION NO. DATE | | | | | | | | |
|------|---|------------|------|--------|-----|-------------|-----|------|------|--|----------------------|------|------|----------|------|----------|------|-----|--|
| | WO | 2005003077 | | | | | | | | | | | | | | | | | |
| | | W: | AE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BW, | BY, | BZ, | CA, | CH, | |
| | | | CN, | co, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | EG, | ES, | FI, | GB, | GD, | |
| | | | GE, | GH, | GM, | HR. | HU, | ID, | IL, | IN, | IS, | JP, | KE. | KG, | KP, | KR. | KZ, | LC, | |
| | | | LK. | LR. | LS. | LT. | LU. | LV. | MA. | MD. | MG. | MK, | MN. | MW. | MX. | MZ. | NA. | NI. | |
| | | | | | | | | | | | | SC, | | | | | | | |
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| | | RW: | | | | | | | | | | SL, | | | | | | | |
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| | | | | | | | | | | | | LU, | | | | | | | |
| | | | | | | | | | | | | GA, | | | | | | | |
| | | | | TD. | | | 20, | O. , | ٠٠, | 02, | 0, | 0, | 01.7 | 02, | ·, | , | , | | |
| | DE | 1033 | | | | A1 20050127 | | | | | DE 2 | 003- | | 20030711 | | | | | |
| | | | | | | | | | | | | | | 20040618 | | | | | |
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| | | | | | | | | | | | | | | | 1127 | | 110, | / | |
| | CN | 1812 | | | | | | | | CZ, EE, HU, PL, SK CN 2004-80018512 | | | | | | 20040618 | | | |
| | CN 1812959 JP 2007506673 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | US 2005-561031 | | | | | | | 0051 | | |
| | | | | | | | | | | | | 005- | | | | | 0051 | | |
| DDTO | IN 2005DN05898 RIORITY APPLN. INFO.: | | | | | | | 2007 | 0024 | | | 003- | | | | | 0030 | | |
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| | | | | | | | | | | | | 003- | | | | | 0030 | | |

OTHER SOURCE(S): CASREACT 142:113615; MARPAT 142:113615

Alkyl difluoroacetoacetate esters (e.g., Et 4,4-difluoroacetoacetate) are prepared by: (A) a reaction of alkyl 4-chloro-4, 4-difluoroacetoacetates (e.g., Et 4-chloro-4,4-difluoroacetoacetate) with trialkyl phosphites P(OR1)3 (R1 = C1-4 alkyl; e.g., tri-Me phosphite) giving phosphate esters F2C:C[OP(:O)(OR1)2]CH2CO2R[R = alkv1; e.g., Et3-[(dimethoxyphosphoryl)oxy]-4,4-difluorobut-3-enoate]; (B) the step (A) phosphate esters are reacted with an amine HN(R2)R3 (R2, R3 = H, C1-4 alkyl; e.g., diisopropylamine) to give enamines F2C:C[N(R2)R3]CH2CO2R

[e.g., Et 3-(diisopropylamino)-4,4-difluorobut-3-enoate]; and (C) acid (e.g., aqueous HC1) hydrolysis of the step (B) enamines.

TT 823234-80-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in a three-step method for producing alkyl 4,4-difluoroacetoacetate esters)

RN 823234-80-6 CAPLUS

CN 3-Butenoic acid, 3-[(dimethoxyphosphinyl)oxyl-4,4-difluoro-, ethyl ester (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

2 ANSWERS

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Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

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100.0% PROCESSED 42 ITERATIONS

SEARCH TIME: 00.00.01

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L11 2 L10

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L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:29299 CAPLUS

142:113615 DOCUMENT NUMBER:

TITLE: Three-step method for producing alkyl

4,4-difluoroacetoacetate esters INVENTOR(S): Gallenkamp, Bernd; Mulder, Lubbertus

PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 24 pp. CODEN: PIXXD2

DOCUMENT TYPE: Pat.ent. LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| | PATENT NO. | | | | | | | | | | | LICAT | | DATE | | | | | | |
|-------|------------------------|----------------|------|-----|-----|-----------------|-----|------|------|----------------|------|-------|------|----------|----------|----------|------|-----|--|--|
| | | 0 2005003077 | | | | | | | | | | | | | | | | | | |
| | | W: AE, AG, AL, | | | AM, | ΑT, | AU, | AZ, | BA, | BB, | BG, | BR, | BW, | BY, | BZ, | CA, | CH, | | | |
| | CN, CO, CR, | | | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | EG, | ES, | FI, | GB, | GD, | | | | |
| | | GE, GH, GM, | | | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC, | | | |
| | | | LK, | LR, | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NA, | NI, | | |
| | | | NO, | NZ, | OM, | PG, | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SY, | | |
| | | | ΤJ, | TM, | TN, | TR, | TT, | TZ, | UA, | UG, | US, | UZ, | VC, | VN, | YU, | ZA, | ZM, | ZW | | |
| | | RW: | BW, | GH, | GM, | KE, | LS, | MW, | MZ, | NA, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AM, | | |
| | | | AZ, | BY, | KG, | KΖ, | MD, | RU, | TJ, | TM, | AT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | | |
| | | | EE, | ES, | FI, | FR, | GB, | GR, | HU, | IE, | IT, | LU, | MC, | NL, | PL, | PT, | RO, | SE, | | |
| | | | SI, | SK, | TR, | BF, | ΒJ, | CF, | CG, | CI, | CM, | GA, | GN, | GQ, | GW, | ML, | MR, | NE, | | |
| | | | | TD, | | | | | | | | | | | | | | | | |
| | DE | 1033 | 1496 | | | A1 20050127 | | | | | DE 2 | 2003- | 1033 | | 2 | 0030 | 711 | | | |
| | EP | 1644 | 314 | | | A1 20060412 | | | | EP 2004-740053 | | | | | | 20040618 | | | | |
| | | R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | | |
| | | | IE, | SI, | FI, | RO, | CY, | TR, | BG, | CZ, | EE, | HU, | PL, | SK | | | | | | |
| | CN 1812959 | | | | | | | 2006 | 0802 | | CN 2 | 2004- | 8001 | 20040618 | | | | | | |
| | JP 2007506673 | | | | | | | 2007 | 0322 | | JP 2 | 2006- | 5180 | 11 | 20040618 | | | | | |
| | | | | | | | | 2006 | 0706 | US 2005-561031 | | | | | | | | | | |
| | IN 2005DN05898 | | | | | | | 2007 | 0824 | | IN 2 | 2005- | DN58 | 98 | | 2 | 0051 | 219 | | |
| PRIOR | PRIORITY APPLN. INFO.: | | | | | | | | | | DE 2 | 2003- | 1032 | 9450 | | A 2 | 0030 | 701 | | |
| | | | | | | | | | | | DE 2 | 2003- | 1033 | 1496 | | A 2 | 0030 | 711 | | |
| | | | | | | | | | | | WO 2 | 2004- | EP66 | 07 | | W 2 | 0040 | 618 | | |
| | | | | | | WO 2004 EL 0007 | | | | | | | | | | | | | | |

OTHER SOURCE(S): CASREACT 142:113615; MARPAT 142:113615

AB Alkyl difluoroacetoacetate esters (e.g., Et 4,4-difluoroacetoacetate) are prepared by: (A) a reaction of alkyl 4-chloro-4,4-difluoroacetoacetates (e.g., Et 4-chloro-4,4-difluoroacetoacetates) with trialkyl phosphites P(OR1)3 (Rl = Cl-4 alkyl; e.g., tri-Me phosphite) giving phosphate esters F2C:C[OP(:0) (OR1)2]CH2CO2R [R = alkyl; e.g., Et 3-[(dimethoxyphosphoryl)oxy]-4,4-difluorobut-3-enoate]; (B) the step (A) phosphate esters are reacted with an amine HN(R2)R3 (R2, R3 = H, Cl-4 alkyl; e.g., diisopropylamine) to give enamines F2C:C[N(R2)R3]CH2CO2R [e.g., Et 3-(diisopropylamino)-4,4-difluorobut-3-enoate]; and (C) acid

(e.g., aqueous HC1) hydrolysis of the step (B) enamines. T 823234-81-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in a three-step method for producing alkyl 4,4-difluoroacetoacetate esters)

RN 823234-81-7 CAPLUS

CN 3-Butenoic acid, 3-[bis(1-methylethyl)amino]-4,4-difluoro-, ethyl ester (CA INDEX NAME)

CF2 0 || (i-Pr)2N-C-CH2-C-OEt

REFERENCE COUNT:

3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:309977 CAPLUS DOCUMENT NUMBER: 125:87124

ORIGINAL REFERENCE NO.: 125:16457a, 16460a

Biomimetic base-catalyzed [1,3]-proton shift reaction. TITLE:

A practical synthesis of

β-fluoroalkvl-β-amino acids

AUTHOR(S): Soloshonok, Vadim A.; Kukhar, Valery P.

CORPORATE SOURCE: Natl. Inst. Res., Inst. Nagova, Nagova City, 462,

Japan

SOURCE: Tetrahedron (1996), 52(20), 6953-6964

CODEN: TETRAB; ISSN: 0040-4020 Elsevier

PUBLISHER: DOCUMENT TYPE: Journal LANGUAGE . English

OTHER SOURCE(S): CASREACT 125:87124

AB An efficient approach to practical synthesis of

 $\beta\text{-fluoroalkyl-}\beta\text{-amino}$ acids is described. The method consists

in the reducing reagent-free base-catalyzed biomimetic transamination

reaction between fluorinated B-keto carboxylic esters and

benzylamine. This transformation involves two sequential base-catalyzed

[1,3]-proton transfers giving rise to corresponding N-benzylidene derivs. as the products of final thermodn. equilibration, directed by the

electron-withdrawing character of fluoroalkyl groups. Opportunity for catalytic enantiocontrolled synthesis of targeted β -amino acids with

application of monochiral base, as a catalyst for these isomerizations, is demonstrated.

178381-17-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis of fluoroalkyl β-amino acids via isomerization of benzyl enamines)

178381-17-4 CAPLUS RN

3-Butenoic acid, 4,4-difluoro-3-[(phenylmethylene)amino]-, methyl ester CN (CA INDEX NAME)

CF2 Ph-CH=N-C-CH2-C-OMe